

Application No. 10/816,489
Response to Final Office Action

Customer No. 01933

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE CLAIMS

Independent claims 1, 45 and 46 have been amended to recite a mirror moving section, based on (now canceled) claim 2.

In addition, withdrawn claim 20 has been amended to better accord with amended independent claim 1.

No new matter has been added and it is respectfully requested that the amendments to claims 1, 20, 45 and 46 be approved and entered under 37 CFR 1.116.

In addition, if claim 1 is found to be allowable, it is respectfully requested that withdrawn claims 4-20 and 23-44 depending therefrom also be considered on the merits and allowed.

THE PRIOR ART REJECTION

Claims 1, 45 and 46 were rejected under 35 USC 102 as being anticipated by "Total Internal Reflection Fluorescence at Biological Surfaces," by Daniel Axelrod ("Axelrod"), and claim 2 was rejected under 35 USC 103 as being obvious in view of Axelrod as well as the combination of Axelrod and USP 4,972,258 ("Wolf et al") or USP 5,866,911 ("Baer"). These rejections, however, are respectfully traversed.

Application No. 10/816,489
Response to Final Office Action

Customer No. 01933

According to the present invention as recited in each of independent claims 1, 45 and 46, a mirror moving section is provided which moves the reflection mirror in a translatory manner in a direction that is substantially perpendicular to a light path of the transmitted illuminative light from the light source.

With this structure, the angle of the light irradiated to the sample, and thus the leak-out depth of the evanescent light, can be changed by adjusting the reflection mirror.

Significantly, according to the claimed present invention the reflection mirror is provided with the condenser lens, to be at a lower portion of the base holding the condenser lens as recited in claims 1 and 45, and to be integrally provided at a lower portion of the condenser lens as recited in claim 46. Thus, the reflection mirror for the laser beam is provided with the condenser lens and fluorescent observation can thereby be implemented with total internal reflection, irrespective of the numerical aperture or magnification of the objective lens, by applying the laser beam onto the specimen by the condenser lens.

The Examiner has acknowledged that Axelrod does not disclose a movable mirror. However, the Examiner contends that the mirror moving section of the present invention would have been obvious in view of Axelrod, either taken alone or in combination with one of one of Wolf et al and Baer.

Application No. 10/816,489
Response to Final Office Action

Customer No. 01933

It is respectfully pointed out, however, that according to Fig. 5 of Axelrod (cited by the Examiner), the prism itself sets the incidence angle of the light on the upper face of the prism. That is, the prism has a shape with a sloping side that reflects the light incident thereto to the upper surface of the prism at an incidence angle of 60°. Thus, it is respectfully submitted that according to Axelrod the angle of deflection is constant for the prism, and to change the angle of deflection a prism having a different angle of deflection would be required.

By contrast, according to the structure of the claimed present invention, by moving the reflection mirror an incidence position of the laser beam on the condenser lens changes, whereby an angle of the light emitted from the condenser lens changes, such that the incidence angle of the light at the boundary of the slide glass changes. Such a pairing of a movable reflection mirror and a condenser lens, whereby the angle of the light emitted from the condenser lens is changeable is not disclosed, taught or even remotely suggested by Axelrod.

In addition, it is respectfully submitted that even if Axelrod were modified in view of the teachings of the movable mirrors of Wolf et al and Baer, the structural features of the present invention as recited in amended independent claims 1, 45 and 46 would stillnot be achieved or rendered obvious, since

Application No. 10/816,489
Response to Final Office Action

Customer No. 01933

according to Axelrod the prism has a constant angle of deflection.

Accordingly, it is respectfully submitted that the present invention as recited in amended independent claims 1, 45 and 46 clearly patentably distinguishes over the cited references, taken singly or in any combination, under 35 USC 102 as well as under 35 USC 103.

* * * * *

In view of the foregoing, entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned for prompt action.

Respectfully submitted,

/Douglas Holtz/

Douglas Holtz
Reg. No. 33,902

Frishauf, Holtz, Goodman & Chick, P.C.
220 Fifth Avenue - 16th Floor
New York, New York 10001-7708
Tel. No. (212) 319-4900
Fax No. (212) 319-5101
DH:iv